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# Compounds and multi-word expressions in Polish

## 1 Introductory: An overview of basic types of MWEs in Polish

The aim of this chapter is to discuss multi-word units in Polish, focusing on complex nominals (so-called juxtapositions), and to consider their interaction with compounds proper.<sup>1</sup>

Multi-word expressions (MWEs) are defined by Sprenger (2003: 4), Masini (2009: 245) and Hüning/Schlücker (2015: 450) as combinations of two or more words which are used as names for specific concepts. MWEs are intermediate between syntactic units and word-formation units. They show phrase-like syntactic complexity yet they resemble morphologically complex words (such as affixal derivatives and compounds) in exhibiting the naming function. Consequently, some scholars (e.g. Masini 2009; Booij 2010; Masini/Benigni 2012) refer to MWEs as “phrasal lexemes”.

The layout of this chapter is as follows. A short overview of MWEs in Polish is given in the remainder of this section. Section 2 mentions basic types of Polish compounds proper and illustrates the occurrence of so-called “solid compounds”. Section 3 offers a brief description of phrasal nouns (referred to as “juxtapositions” by Polish linguists). Section 4 discusses some criteria used in distinguishing between compounds proper, solid compounds and juxtapositions. The criteria in question involve prosodic pattern, orthographic form and inflectional properties of compounds. Section 5 examines syntactic fixedness and the internal complexity of juxtapositions. In Section 6 the issue of competition and complementariness between compounds proper and juxtapositions is explored. Section 7 demonstrates that a felicitous account of the interaction between morphological compounds and phrasal lexemes can be offered within the framework of Construction Morphology (as developed by Masini 2009; Booij 2010; Masini/Benigni 2012, among many others). A summary of conclusions is given in Section 8.

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<sup>1</sup> I would like to thank the editor of the volume and the anonymous reviewers for their useful comments on the previous version of this chapter.

Before presenting some examples of MWEs in Polish, we can add that instead of the term “multi-word unit” (Pol. *jednostka wielowyrazowa*), Polish linguists often use the term “phraseological unit” or “phraseme”<sup>2</sup> (Pol. *związek frazeologiczny, frazem*). According to the traditional classification<sup>3</sup> proposed by Stanisław Skorupka (e.g. Skorupka 1967), three types of phraseological units are distinguished on the basis of their formal structure: units which are nominal expressions (Pol. *wyrażenia*), such as *pies ogrodnika* (dog.NOM gardener.GEN) ‘dog in the manger’, verb-phrases (Pol. *zwroty*), e.g. *gryźć ziemię* (bite.INF earth.ACC) ‘to bite the dust’, and units which exhibit the structure of a sentence (Pol. *frazy*), e.g. *Do wesela się zagoi* (until wedding.GEN REFL heal.FUT.3SG) ‘It will heal in no time’. Furthermore, phraseological units are divided into three types, depending on their degree of semantic non-compositionality and syntactic fixedness, into fixed idiomatic phraseological units (Pol. *związki stałe*), collocable phraseological units (Pol. *związki łączliwe*), and free syntactic combinations (Pol. *związki luźne*, lit. loose phraseological units). Fixed phraseological units, such as *biały kruk* (lit. white raven) ‘rare specimen’, resemble non-derived words in that their meaning does not follow from the meaning of individual components. In the case of collocable phraseological units, such as *dobry humor* ‘good mood’ and *pobudzić do działania* (wake.INF to action.GEN) ‘to incite, to invigorate’, their constituents retain literal meaning but show a preference to occur together. Loose phraseological units correspond to free syntactic strings, such as *młoda kobieta* ‘young woman’ or *zjeść jabłko* ‘to eat (an/the) apple’.

Cross-linguistic typologies of phraseological units are discussed by, among others, Granger/Paquot (2008), Fellbaum (2011) and Hüning/Schlücker (2015: 45). I will follow the latter classification in a very brief presentation of types of multi-word expressions in Polish below.

Proverbs in Polish can be exemplified by such sentences as *Ręka rękę myje* (hand.NOM hand.ACC wash.PRES.3SG) ‘You scratch my back and I’ll scratch yours’. Commonplaces can be illustrated by truisms and tautologies based on everyday experience, e.g. *Żyje się raz* ‘You only live once’. Quotations come from popular literary works, songs and films, e.g. *Kobieto, puchu marny* (woman.VOC fluff.VOC feeble.VOC) ‘Woman, you wretched fluff’.

<sup>2</sup> As is stated in the entry for “idiom” in Polański (ed.) (1999: 244), the term “phraseme” (Pol. *frazem*) in the narrow sense is employed to refer to multi-word expressions in which at least one item shows a literal meaning, e.g. *ślepa uliczka* ‘blind alley’, in contrast to idiomatic expressions whose meaning shows no relatedness to the meaning of particular constituents, e.g. *drzeć koty* (tear.INF cat.ACC.PL) ‘to quarrel’.

<sup>3</sup> For discussion of other classifications of phraseological units used in the Polish phraseological literature, cf. Lewicki (1976: 9–23), Żmigrodzki (2009: 100) and Szerszunowicz (2012).

Fossilised forms<sup>4</sup> include complex prepositions, such as *w związku z* (lit. in connection with) ‘due to’ and *naprzeciw* (lit. on opposite) ‘opposite, across from’.

Routine formulas in Polish can be exemplified by such expressions as *na zdrowie* (lit. on health.ACC) ‘Cheers!’ and *do widzenia* (until seeing.GEN) ‘good bye’.

Collocations are “prefabricated” semantically transparent combinations of words which show affinity, e.g. *zjełczone masło* ‘rancid butter’ and *myć zęby* (wash teeth.ACC) ‘to brush teeth’.

Among verbal idioms one can mention such phrases as *kopnąć w kalendarz* (kick.INF in calendar.ACC) ‘to die’. Some verbal idioms (e.g. those given above) are based on metaphors. Metaphorical expressions include also prepositional phrases, adjectival phrases and noun phrases (or phrasal nouns), such as *po między młotem a kowadłem* (between hammer.INS and anvil.INS) ‘between a rock and a hard place’ and *pies ogrodnika* (dog.NOM gardener.GEN) ‘dog in the manger’.

There are no phrasal verbs proper in Polish. However, the range of meanings exhibited by phrasal (or particle) verbs in Germanic languages corresponds largely to the meanings of prefixed verbs in Polish (and in other Slavonic languages). This is shown by the comparison of the prefixless verb *rzucić* ‘to throw’ and its prefixal derivatives, e.g. *narzucić* ‘to throw (sth) on’, *rozrucić* ‘to throw around’, *wyrzucić* ‘to throw away’.

Among fixed expressions in Polish, there occur combinations of nouns with verbs of general meaning,<sup>5</sup> such as *oddać* ‘to give back’, *zrobić* ‘to do, to make’, *wykonać* ‘to perform’, e.g. *oddać skok* ‘to do a jump’, *zrobić salto* ‘to do a somersault’, *wykonać przelew bankowy* ‘to make a bank transfer’.

There are stereotyped comparisons among phraseological units in Polish, such as *silny jak byk* (strong as bull) ‘as strong as an ox’ and *pić jak szewc* (lit. drink like shoemaker) ‘to drink like a fish’.

Binomial expressions can be illustrated by combinations of nouns, verbs, adjectives or adverbs linked by a conjunction, such as *mąż i żona* (lit. husband and wife) ‘man and wife’, *żyć i umierać* ‘live and die’. They also include combina-

<sup>4</sup> Solid compounds, such as *wniebowzięcie* ‘assumption (of Virgin Mary)’, can also be interpreted as frozen forms (cf. Section 2).

<sup>5</sup> As pointed out to me by an anonymous reviewer, Buttler (1976) observes the expansion of analytic constructions in Polish. She (ibid.: 70) mentions the occurrence of verbo-nominal constructions, such as *ulec zepsuciu* (lit. undergo deterioration) ‘deteriorate, go bad’, and noun-adjective combinations such as *akcja szkoleniowa* (lit. action training.RA), which replace synonymous verbs or nouns, i.e. *zepsuć się* ‘to deteriorate, go bad’, and *szkolenie* ‘training course’.

tions of nouns linked by a preposition, e.g. *ramię w ramię* (lit. shoulder in shoulder) ‘shoulder to shoulder’.

Complex nominals, i.e. multi-word expressions with a naming function and with the internal structure of noun phrases, will be discussed in Section 3 (as juxtapositions).

First, however, in Section 2 some types of Polish compounds proper will be described.

## 2 Types of compounds proper and solid compounds in Polish

Polish composites are usually divided into three types (Grzegorzczkowska/Puzynina 1984; Szymanek 2010; Nagórko 2016): compounds proper (which meet the criteria of morphological compounds, as shown in Section 4), solid compounds (Pol. *zrosty*), and juxtapositions (Pol. *zestawienia*).

Solid compounds originate from the coalescence (i.e. merging) of syntactic phrases (Długosz-Kurczabowa/Dubisz 1999: 60; Szymanek 2010: 224). They are written as one orthographic word, e.g. *Wielkanoc* ‘Easter’, which comes from *Wielka Noc* (lit. great night), *czcigodny* ‘respectful’, from *czci godny* (lit. respect-deserving), and *zmartwychwstały* ‘resurrected’, originating from the phrase *z martwych wstały* (lit. from dead arisen). According to Grzegorzczkowska/Puzynina (1984: 396), solid compounds characteristically lack interfixes<sup>6</sup> or suffixes but they retain (compound-internal) inflectional elements.<sup>7</sup>

Compounds proper consist of two stems which are characteristically linked with a vocalic interfix (abbreviated here as LV, i.e. linking vowel), e.g. *drobn-o-ustrój* (small+LV+organism)<sup>8</sup> ‘microorganism, microbe’ and *słodk-o-gorzk-i* (lit. sweet+LV+bitter+NOM.SG) ‘bittersweet’. In the case of compounds consisting of a verb stem followed by a nominal stem, the interfix is the vowel *-i-/-y-*, as in *gol-i-brod-a* (shave+LV+beard+NOM.SG) ‘barber’, and *mocz-y-mord-a* (soak+LV+trap+NOM.SG) ‘sponge, drunkard’. When the left-hand constituent is the numeral

<sup>6</sup> Consequently, Jadacka (2005: 121) regards other composites which lack a vocalic interfix as solid compounds, even if they do not originate from the “freezing” of syntactic phrases, e.g. *seksmasaż* ‘sex massage’, *biznespartner* ‘business partner’.

<sup>7</sup> Cf. Section 4 for more discussion of inflectional endings in solid compounds.

<sup>8</sup> The compound nouns in question are normally written without hyphens. I use hyphens here to show the internal structure of the composites under discussion.

*dw(u)-* ‘two’, the interfix appears as the vowel *-u-*, e.g. *dw-u-znak* (two+LV+sign) ‘digraph’. Some types of compounds proper, e.g. those with the numeral *trój-* ‘three’, or the element *pół-* ‘half’ contain no linking vowel, e.g. *trójskok* (three+jump) ‘triple jump’, *północ* (half+night) ‘midnight, north’.

Compounds such as *drobnoustrój* ‘microorganism’ and *północ* ‘midnight, north’ can be compared to primary (root) compounds in English, in which two stems are combined without any intervention of derivational suffixes. The only formative that functions as the marker of composition is the vocalic interfix (if present).

On the other hand, in the case of compound nouns such as *król-o-bój-stw-o* (king+LV+kill+SUFF+NOM.SG) ‘regicide’, and *krwi-o-daw-c-a* (blood+LV+give+SUFF+NOM.SG) ‘blood donor’ both the linking vowel and the final derivational suffix act as co-formatives. Such Polish compounds, referred to as “interfixal-suffixal formations”, are analogous to synthetic compounds in English, such as *proof-reading* or *truck-driver* (as observed by Szymanek 2010: 221). The right-hand verb stem with the nominalising suffix can either form an independently occurring word, e.g. *dawca* ‘giver’, or be unattested as a free form, e.g. \**bójstwo* ‘killing’.

There is yet another (formal) type of compounds proper, namely “interfixal-paradigmatic formations” (Grzegorzczkowska/Puzynina 1984: 398; Szymanek 2010: 222), in which two elements act as co-formatives (signalling the operation of compounding): the linking vowel and the so-called paradigmatic formative (i.e. a change of the inflectional paradigm). The right-hand stems of the interfixal-paradigmatic compounds *paliw-o-mierz* (fuel+LV+measure+ $\emptyset$ )<sup>9</sup> ‘fuel indicator’ and *dług-o-pis* (long+LV+write+ $\emptyset$ ) ‘ballpen’ are nominalised verb roots, which undergo conversion (i.e. paradigmatic derivation) into nouns. The resulting nominalised elements *-mierz* and *-pis* do not occur as nouns in isolation. Another type of interfixal-suffixal formations is exemplified by the compound noun *żmij-o-głów* (adder+LV+head+ $\emptyset$ ) ‘snakehead fish’, in which the right-hand stem does not show a category change but undergoes a shift of the paradigm (from feminine declension, as in *głow-a* (head+NOM.SG), to masculine declension).

If Polish compounds proper are divided into structural types (according to the cross-linguistic classification proposed by Scalise/Bisetto 2009), the compounds in (1) are recognised as subordinate compounds, in which one constituent is subordinated semantically and syntactically to the other so that a complement-head relation can be established between them. The left-hand constituent

<sup>9</sup> The element  $\emptyset$  represents here a paradigmatic formative (i.e. a zero morpheme), as in Szymanek (2010: 222) and Kolbusz-Buda (2014: 121).

in (1a–c) can be regarded as the object of the action of picking or indicating, and the result of the action of writing. In (1d) the left-hand constituent, i.e. the verb stem *wyrw-*, is syntactically superordinate to the following nominal stem *dqb*. The compound nouns in (1a) and (1b) are endocentric since they are hyponyms of their heads, e.g. *bajkopisarz* ‘fabulist, writer of fables’ is a kind of a writer. The compounds in (1c) and (1d) are regarded as exocentric by Grzegorzczkova/Puzynina (1984) and Szymanek (2010).<sup>10</sup>

- (1a) *grzyb-o-bra-ni-e* (mushroom+LV+take+SUFF+NOM.SG) ‘mushroom picking’
- (1b) *bajk-o-pis-arz* (fable+LV+write+SUFF) ‘fabulist, writer of fables’
- (1c) *drog-o-wskaz* (road+LV+indicate+Ø) ‘signpost’
- (1d) *wyrw-i-dqb* (pull\_out+LV+oak) ‘strong man, athlete’

In attributive compound nouns, such as those in (2), the modifying element expresses some property of the head noun. The compound in (2a) is endocentric, whereas those in (2b) and (2c) are exocentric.

- (2a) *żyw-o-plot* (live+LV+fence) ‘hedge’
- (2b) *biał-o-głow-a* (white+LV+head+NOM.SG) ‘(obs.) woman’
- (2c) *zielon-o-nóż-k-a* (green+LV+leg+DIM+NOM.SG) ‘green-legged partridge’

Coordinate compounds in (3) consist of constituents whose status is equal. They can either be treated as endocentric formations which contain two heads, or as exocentric formations, in which the head is missing.<sup>11</sup>

- (3a) *barman-o-kelner* (bartender+LV+waiter) ‘waiter and bartender’
- (3b) *gad-o-ptak* (reptile+LV+bird) ‘archaeopteryx’
- (3c) *spódnic-o-spodni-e* (skirt+LV+trouser+NOM.PL) ‘skort, cullottes’

<sup>10</sup> Grzegorzczkova/Puzynina (1984: 399) regard as exocentric formations those compound nouns which represent (mainly) the interfixal-paradigmatic type (e.g. *drog-o-wskaz* ‘signpost’) or the interfixal-suffixal type (*czud-zo-ziemi-ec* ‘foreigner’) and in which the right-hand (root+Ø or root+SUFF) constituents do not occur as independent nouns, e.g. *\*wskaz* and *\*ziemiec*. The anonymous reviewer observes, however, that *drogowskaz* ‘signpost’ can be interpreted as an endocentric formation. Cf., among others, Grzegorzczkova/Puzynina (1984: 399–403) and Kolbusz-Buda (2014: 58–61, 133–162) for more discussion of the issue.

<sup>11</sup> The endocentric/exocentric status of a coordinate compound depends to some extent on a particular semantic paraphrase (one of several available ones) which is employed (cf. Grzegorzczkova/Puzynina 1984: 399; Cetnarowska 2016).

Compound adjectives can be similarly divided into subordinate (e.g. (4a)), attributive (4b) and coordinate ones (4c).

- (4a) *złot-o-daj-n-y* (gold+LV+give+SUFF+NOM.SG.M) ‘gold-giving’
- (4b) *zielon-o-ok-i* (green+LV+eye+NOM.SG.M) ‘green-eyed’
- (4c) *słodk-o-kwaś-n-y* (sweet+LV+acid+SUFF+NOM.SG.M) ‘sweet and sour’

Compound verbs are rare in Polish. Nagórko (2016: 2838) suggests that many of them result from loan translation, e.g. *lekceważyć* ‘to disrespect, to neglect’ (from German *gering schätzen*<sup>12</sup>).

Długosz-Kurczabowa/Dubisz (1999: 50f.) point out that many compound nouns proper, solid compounds, and compound adjectives in Polish can be treated as calques. Some religious terms are translations of Latin compounds, e.g. *wszech-mogąc-y* (all+able+NOM.SG) ‘almighty’ (from Latin *omnipotens*). Polish compounds which are imitations of German compound lexemes include, among others, *list-o-nosz* (letter+LV+carry+ø) ‘postman’ (from *Briefträger*) and *ogni-o-trwał-y* (fire+LV+durable+NOM.SG) ‘fireproof’ (from *feuerfest*). The influence of Russian, on the other hand, can be observed in the case of such compounds as *brak-o-rób-stw-o* (dud+LV+do+SUFF+NOM.SG) ‘wastage’ (from *brakodielstvo*). Nevertheless, Długosz-Kurczabowa/Dubisz (ibid.: 75) argue for the recognition of compound formation in Polish as a native pattern (which can be traced back to Proto-Slavonic forms or the Old Polish period).

### 3 Juxtapositions (“phrasal nouns”)

Juxtapositions show phrasal structure. The following syntactic types of juxtapositions, i.e. phrasal nouns, can be identified in Polish.

- (5) N+N.GEN
- (5a) *dom studenta* (house.NOM student.GEN.SG) ‘dormitory, student hall of residence’
- (5b) *mąż stanu* (man.NOM state.GEN.SG) ‘statesman’

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<sup>12</sup> As is pointed out to me by the editor of the volume, the expression *gering schätzen* is not normally regarded as a compound in German.



- (6) N+PP
- (6a) *chustka do nosa* (kerchief.DIM.NOM for nose.GEN) ‘handkerchief’
- (6b) *dziurka od klucza* (hole.DIM.NOM from key.GEN) ‘keyhole’
  
- (7) N+A
- (7a) *panna młoda* (maid young) ‘bride’
- (7b) *drukarka laserowa* (printer laser.ADJ) ‘laser printer’
- (7c) *krem odżywczy* (cream nourishing) ‘nourishing cream’
  
- (8) A+N
- (8a) *biały kruk* (white raven) ‘rare specimen’
- (8b) *nocna zmiana* (night.ADJ shift) ‘night shift’
- (8c) *wieczne pióro* (eternal pen) ‘fountain pen’
  
- (9) N+N
- (9a) *poeta-tłumacz* (poet translator) ‘poet-translator’
- (9b) *kobieta-guma* (woman rubber) ‘female contortionist’
- (9c) *wywiad-rzeka* (interview river) ‘extended interview’

The constituents of juxtapositions exhibit the relation of government (as in N+N.GEN phrasal nouns) or agreement (as in N+A or A+N juxtapositions and in N+N juxtapositions). The adjective in N+A and A+N phrasal nouns is often a denominational one, i.e. a relational adjective such as *laserowy* (laser.RA) from the noun *laser* ‘laser’, and then the whole combination is a possible translation equivalent in Polish for a noun+noun compound in English or in other Germanic languages.<sup>13</sup> It needs to be added, though, that some N+A or A+N juxtapositions contain non-derived adjectives, e.g. *młoda* ‘young’ in *panna młoda* ‘bride’, or deverbal adjectives, e.g. *odżywczy* ‘nourishing’ from the verb *odżywiać* ‘to nourish’.

When the tripartite structural typology of compounds proper is applied to juxtapositions, it can be noted that Polish juxtapositions behave similarly to those in Russian, discussed by Masini/Benigni (2012). N+N.GEN and N+PP phrasal nouns are often subordinate composites (as in 10), N+A and A+N combinations tend to be attributive (as in 11) while N+N combinations (in 12) are coordinate juxtapositions.

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**13** On the basis of translation equivalence between Germanic N+N compounds and Polish N+RA (or RA+N) units, ten Hacken (2013) argues that multi-word expressions in Polish consisting of nouns and relational adjectives should be treated as compounds.

(10a) *maszyna do szycia* (machine for sewing) ‘sewing machine’

(10b) *dawca organów* (donor.NOM organ.GEN.PL) ‘organ donor’

(11a) *stara panna* (old maid) ‘old maid’

(11b) *panda wielka* (panda great) ‘giant panda’

(12a) *torba-worek* (bag sack) ‘large bag’

(12b) *kierowca-dostawca* (driver deliverer) ‘delivery driver’

The relationship between the syntactic type and the structural classification of juxtapositions is not complete, though. N+N combinations (whose constituents show agreement) and N+N.GEN phrasal nouns in (13) require attributive interpretation.

(13a) *ryba-piła* (fish saw) ‘sawfish’

(13b) *kobieta-guma* (woman rubber) ‘female contortionist’

(13c) *człowiek honoru* (man.NOM honour.GEN) ‘man of honour’

Damborský (1966) remarks that some N+N juxtapositions may have entered the Polish language as calques of French formations (e.g. *zegarek-bransoletka* ‘watch-bracelet’) or as calques of Russian complex lexemes (e.g. *miasto-bohater* ‘hero city’). Nevertheless, he concludes that N+N juxtapositions represent mostly a native pattern of composite formation (as is also observed by Długosz-Kurczabowa/Dubisz 1999).

In the next section criteria which can be employed in distinguishing between compounds proper and juxtapositions will be presented.

## 4 Differences between compounds proper, solid compounds and juxtapositions

Polish compounds proper exhibit features expected of morphological compounds cross-linguistically (cf. Lieber/Štekauer 2009; Booij 2010). They are written as one orthographic word, though some compounds are hyphenated, e.g. *słodko-kwaśny* ‘sweet and sour’.<sup>14</sup>

<sup>14</sup> The hyphen is employed in the case of coordinate compound adjectives (e.g. *przemysłowo-rolniczy* ‘industrial and agricultural’) while attributive and subordinate compound adjectives

A compound proper constitutes one prosodic unit with respect to stress assignment. As is indicated here (for clarity) by the capitalization of the appropriate vowel, the main lexical stress falls on the penultimate syllable in compound nouns such as *dlugOpis* ‘ballpen’, and in compound adjectives, e.g. *ciemnoniebiEski* ‘dark blue’ (cf. Szymanek 2010: 225).<sup>15</sup>

Constituents of compounds proper in Polish form one morphological word, with the morphological head located on the right. The inflectional ending is attached to the right-hand stem, e.g. *-a* (NOM.SG) in (14a). In the case of exocentric compound nouns (as in 14b), the inflectional ending appears to attach to the whole compound stem, rather than to the right-hand stem, since the inflectional characteristics of those compound nouns often diverge from the inflectional properties of their right-hand constituents.<sup>16</sup>

- (14a) *mebl-o-ścian-k-a*  
furniture+LV+wall+DIM+NOM.SG  
‘wall unit’
- (14b) *staw-o-nog-a*  
joint+LV+foot+GEN.SG  
‘arthropod’ (GEN.SG)

Solid compounds exhibit most of the properties of morphological compounds. They are written as one orthographic word and constitute one prosodic domain (with respect to stress assignment), as is shown by *WielkAnoc* ‘Easter’, as opposed to the free syntactic combination *wiElka nOc* ‘great night’. The inflectional endings in solid compounds are usually attached only to the right-hand stems, e.g. *czcigodn-emu* (venerable.DAT.SG), and *duszpasterz-a* (priest.GEN.SG). The inflectional ending of the left-hand constituent (if present)<sup>17</sup> is ‘frozen’ inside the solid compound and it takes the function of the vocalic interfix, e.g. *-i* (GEN.SG) in *czci-godny* ‘venerable’. In selected solid compound nouns both stems obligatorily

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are written as single orthographic words (e.g. *roponośny* ‘oil-bearing’, *ciemnozielony* ‘dark green’).

<sup>15</sup> In the case of polysyllabic compounds, apart from the main stress on the penultimate syllable, there may occur secondary stresses on the first constituent, e.g. *prAlkosuszArka* ‘washer dryer’, *ciEmnoniebiEski* ‘dark blue’.

<sup>16</sup> The compound noun *stawonóg* ‘arthropod’ is masculine, while its right-hand constituent *noga* ‘foot’ is feminine (cf. *nog-i* ‘foot+GEN.SG’).

<sup>17</sup> There is no vocalic element linking the constituents *dusz* (soul.GEN.PL) and *pasterz* (shepherd.NOM.SG) since the marker of genitive plural in the first constituent is a morphological zero.

decline as independent morphological words,<sup>18</sup> in spite of constituting a single prosodic and orthographic unit, e.g. *Biał-y-stok* (white+NOM.SG+slope+NOM.SG) ‘Białystok.NOM.SG’ (a city in north-eastern Poland) and *Biał-ego-stok-u* (white+GEN.SG+slope+GEN.SG) ‘Białystok.GEN.SG’.

Juxtapositions consist of constituents which are written as separate orthographic words, e.g. *maszyna do pisania* (machine for writing) ‘typewriter’, *kobieta pilot* (woman pilot) ‘female pilot’ and *prawa człowieka* (law.NOM.PL man.GEN.SG) ‘human rights’. However, some attributive N+N compounds, e.g. *kobieta-guma* (woman rubber) ‘female contortionist’, and coordinate N+N compounds, e.g. *malarz-tapeciarz* ‘painter-decorator’, are hyphenated,<sup>19</sup> in which they resemble morphological compounds in other languages (cf. Lieber/Štekauer 2009) and coordinate adjectival compounds proper in Polish.

Each element of a juxtaposition takes its own inflectional endings. They can stand in either the relation of agreement (as in the case of N+A, A+N and N+N juxtapositions), or the relation of government (in the case of N+N.GEN or N+PP phrasal nouns). Constituents of juxtapositions also behave as independent units for the purpose of lexical stress assignment, as is shown by the stress pattern of *mAlarz-tapEciarz* ‘painter-decorator’, and *chUstka do nOsa* (lit. kerchief for nose) ‘handkerchief’.

## 5 Syntactic fixedness

The Lexical Integrity Principle, postulated by Anderson (1992), does not allow rules of syntax to manipulate or have access to parts of words. Booij (2010: 177) points out that this principle can be split into two subparts (i.e. two subconstraints).

One subconstraint prohibits the operation of syntactic rules of case assignment and agreement on constituents of morphologically complex words. Inflectional endings do not occur inside affixal derivatives or inside compounds proper, cf. *czarn-o-biał-ego* (black+LV+white+GEN.SG) ‘black-and-white.GEN.SG’ and not \**czarn-ego-biał-ego* (black+GEN.SG+white+GEN.SG). This subconstraint is vio-

<sup>18</sup> There occur also solid compounds which allow alternative word-forms, e.g. *Wielk-a-noc* (great+NOM.SG/LV+night) ‘Easter.NOM.SG’, *Wielk-a-noc-y* (great+LV+night+GEN.SG) or *Wielki-ej-noc-y* (great+GEN.SG+night+GEN.SG) ‘Easter.GEN.SG’.

<sup>19</sup> According to current prescriptive recommendations, Polish coordinate compounds should be hyphenated while attributive compounds should not.

lated in the case of juxtapositions and some solid compounds, as was illustrated in the previous section.

The second subpart of the Lexical Integrity Principle predicts that words can be neither split by intervening constituents nor reordered. This subconstraint is met in the case of the majority of compounds proper and solid compounds in Polish. The left-hand modifiers of the compound nouns *dlug-o-pis* (long+LV+write+Ø) ‘ballpen’ and *grzyb-o-bra-ni-e* (mushroom+LV+take+SUFF+NOM.SG) ‘mushroom picking’ cannot be shifted to the right-hand position, as is shown by the ill-formedness of *\*pis-o-dlug* and *\*brani-o-grzyb*. Moreover, those left-hand (modifier) stems cannot be modified themselves, as indicated by the unacceptability of *\*bardzo-dlug-o-pis* (very+long+LV+write+Ø) in the intended meaning ‘ballpen which can write for a long time’. Constituents of coordinate compounds proper show some possibility of reordering, e.g. *czerwono-biały* ‘red and white’ and *biało-czerwony* ‘white and red’.<sup>20</sup> However, one potential order of elements tends to be conventionalised, hence *?suszark-o-pralk-a* (dryer+LV+washer+NOM.SG) and *?robotnik-o-chłop* (worker+LV+peasant) sound decidedly odd when compared to the institutionalised forms *pralk-o-suszark-a* (washer+LV+dryer+NOM.SG) ‘washer and dryer’ and *chłop-o-robotnik* (peasant+LV+worker) ‘a peasant farmer who also works in a factory’.

Juxtapositions resemble compounds proper in Polish in that their internal constituents cannot be modified (cf. Cetnarowska/Trugman 2012; Cetnarowska 2018).<sup>21</sup> If an adverbial modifier is inserted in front of the adjective in the N+A juxtaposition *foka szara* (seal grey) ‘grey seal’, the resulting string stops functioning as a naming unit and can be interpreted as a free syntactic combination, i.e. *foka bardzo szara* (seal very grey) ‘seal whose fur is very grey’. Similarly, the addition of the demonstrative *tego* (this.GEN.SG) in front of the noun *człowieka* (man.GEN.SG) in the N+N.GEN phrasal noun *prawa człowieka* (law.NOM.PL man.GEN.SG) ‘human rights’ results in the reanalysis of the juxtaposition as a freely composed noun phrase, i.e. *prawa tego człowieka* (law.NOM.PL this.GEN.SG man.GEN.SG) ‘this man’s rights’. Some instances of phrasal nouns that contain internal pre- or post-modifiers (and complements) can be encountered, as shown in (15). It can be argued, though, that these are cases of complex phrasal nouns which contain

<sup>20</sup> Nagórko (2016: 2837) remarks that there is a difference in meaning between *biało-czerwony* (white-red), which can be used to describe the flag of Poland, and *czerwono-biały* (red-white), which describes the colours of the flag of Monaco.

<sup>21</sup> Consequently, adjectives and nouns are regarded as non-projecting categories (A<sup>0</sup> and N<sup>0</sup>) in multi-word units in Polish by Cetnarowska (2018), as is suggested for MWEs in other languages by Booij (2010).

phrasal nouns as their subconstituents, e.g. *małe dziecko* ‘small child’ functions as a naming unit, hence it can become a part of another naming unit.

- (15a) *dom*                                      *dzieck-a*  
house.NOM.SG                      child+GEN.SG  
‘orphanage, children’s home’
- (15b) *dom*                                      *mał-ego*                      *dzieck-a*  
house.NOM.SG                      small+GEN.SG                      child+GEN.SG  
‘orphanage for small children’
- (15c) *wod-a*                                      *mineral-n-a*  
water+NOM.SG                      mineral+RA+NOM.SG  
‘mineral water’
- (15d) *gazowan-a*                              *wod-a*                                      *mineral-n-a*  
aerated+NOM.SG                      water+NOM.SG                      mineral+RA+NOM.SG  
‘sparkling mineral water’

The issue of changes in the internal order of elements of juxtapositions is more complex. Constituents of coordinate N+N juxtapositions show a considerable degree of mobility,<sup>22</sup> e.g. *aktor-tancerz* (actor-dancer) and *tancerz-aktor* (dancer-actor), or *kobieta pilot* (woman pilot) and *pilot kobieta* (pilot woman).

N+N.GEN juxtapositions and N+PP juxtapositions resist internal reordering (except in poetry, artistic prose or journalese). Shifts in the order of their constituents result in the infelicity of the resulting phrasal noun, e.g. ??*honoru słowo* (honour.GEN.SG word.NOM.SG) vs. *słowo honoru* (word.NOM.SG honour.GEN.SG) ‘word of honour’, or ??*do szycia maszyna* (for sewing.GEN.SG machine.NOM.SG) vs. *maszyna do szycia* (machine.NOM.SG for sewing.GEN.SG) ‘sewing machine’. Alternatively, such shifts may lead to the reinterpretation of the juxtaposition as a regular syntactic phrase, e.g. *małego dziecka dom* (small.GEN.SG child.GEN.SG house.NOM.SG) ‘house of (a particular) small child’.

The mobility of constituents of A+N and N+A phrasal nouns depends on their semantic compositionality and the range of polysemy exhibited by a given adjective.

Cetnarowska/Pysz/Trugman (2011) and Cetnarowska/Trugman (2012) divide combinations of classifying adjectives and nouns (in any order) in Polish into

<sup>22</sup> The internal word order is fixed in the case of some types of coordinate and quasi-coordinate juxtapositions, e.g. those that consist of a superordinate term followed by a hyponym, such as *lekarz ginekolog* (physician+gynecologist) ‘gynecologist’ or Kinship+Property coordinate juxtapositions, e.g. *syn prawnik* (son+lawyer) ‘lawyer son’.

three groups: idiomatic A+N combinations, N+A ‘tight units’ and A+N/N+A combinations in which the classifying adjective is regarded as ‘migrating’.

A+N juxtapositions which are regarded by Cetnarowska/Pysz/Trugman (2011) as lexicalised idiomatic phrases, such as *koński ogon* (horse.RA tail) ‘ponytail’, *lwia paszcza* (lion.RA jaw) ‘snapdragon’, and *boża krówka* (god.RA cow.DIM) ‘ladybird’, show syntactic fixedness. Their constituents cannot be shifted, since the postposing of the adjective changes their meaning to non-idiomatic combinations, as shown in (16).

- (16a) *koń-sk-i*                      *ogon*  
          horse+RA+NOM.SG      tail.NOM.SG  
          ‘ponytail’
- (16b) *ogon*                              *koń-sk-i*  
          tail.NOM.SG                      horse+RA+NOM.SG  
          ‘tail of (a/the) horse’

The elements of N+A ‘tight units’ are not (normally) reversible, either. Post-head classifying adjectives in tight units, such as *kurier dyplomatyczny* (courier diplomatic) ‘diplomatic courier’, *pancernik olbrzymi* (armadillo giant) ‘giant armadillo’ and *foka szara* (seal grey) ‘grey seal’, change their interpretation to those of qualifying adjectives, as indicated in (17) and (18).

- (17a) *kurier*                              *dyplomat-yczn-y*  
          courier.NOM.SG                  diplomat+RA+NOM.SG  
          ‘diplomatic courier’
- (17b) *dyplomat-yczn-y*              *kurier*  
          diplomat+RA+NOM.SG courier.NOM.SG  
          ‘tactful courier’
- (18a) *pancernik*                      *olbrzym-i*  
          armadillo.NOM.SG              giant.A+NOM.SG  
          ‘giant armadillo’
- (18b) *olbrzym-i*                      *pancernik*  
          giant.A+NOM.SG                  armadillo.NOM.SG  
          ‘very large armadillo’

‘Migrating’ classifying adjectives are felicitous in phrasal nouns both pre-nominally and post-nominally, without incurring any serious change in their interpretation (as in (19) and (20)). They can be analysed as intersective modifiers (as observed by Cetnarowska/Trugman 2012). The choice between placing a migrat-

ing classifying adjective in the pre- or post-head position is determined by a number of various syntactic and stylistic factors, one of them being the occurrence of additional classifying adjectives or genitive complements in a phrasal noun (cf. Szumska 2006; Cetnarowska/Pysz/Trugman 2011; Linde-Usiekiewicz 2013; Cetnarowska 2014 for more discussion).

- |       |   |                                   |                                     |
|-------|---|-----------------------------------|-------------------------------------|
| (19a) | <i>noc-n-y</i><br>night+RA+NOM.SG<br>'night shop'     | <i>sklep</i><br>shop.NOM.SG       |                                     |
| (19b) | <i>sklep</i><br>shop.NOM.SG<br>'night shop'           | <i>noc-n-y</i><br>night+RA+NOM.SG |                                     |
| (20a) | <i>kurtk-a</i><br>jacket+NOM.SG<br>'men's jacket'     | <i>męsk-a</i><br>male.NOM.SG      |                                     |
| (20b) | <i>męsk-a</i><br>male+NOM.SG<br>'men's winter jacket' | <i>kurtk-a</i><br>jacket+NOM.SG   | <i>zim-ow-a</i><br>winter+RA+NOM.SG |

Syntactic flexibility in idioms can be regarded (cross-linguistically) as a consequence of their semantic transparency, as is argued by Nunberg/Sag/Wasow (1994). The behaviour of A+N and N+A phrasal nouns in Polish provides further evidence for such a conclusion, since idiomatic A+N juxtapositions are 'syntactically frozen'. Fellbaum (2011: 448) shows, however, on the basis of data from German and English, that even (more) opaque idioms may allow for morphological and syntactic variation, depending on their larger sentential context and on the presence of stylistic (or humorous) colouring. Some instances of the word-order modification in N+A 'tight units', to facilitate word play or contrast, are mentioned by Cetnarowska (2015).

## 6 Competition between compounds and juxtapositions

The conventionalisation of a given concept by means of a compound or a phrasal unit in Polish is to some extent arbitrary. For instance, while there exist the synthetic compounds proper *koni-o-krad* (horse+LV+steal+Ø) 'horse thief' and (used rather rarely) *kur-o-krad* (hen+LV+steal+Ø) 'chicken thief', N+N.GEN phrasal lex-



emes are used to denote a person who steals cars or bicycles, i.e. *złodziej samochodów* (thief.NOM.SG car.GEN.PL) ‘car thief’ and *złodziej rowerów* (thief.NOM.SG bicycle.GEN.PL) ‘bicycle thief’.

Nevertheless, it is possible to come across synonymous compounds proper and juxtapositions in Polish. Let us look at the competition between (and coexistence of) subordinate synthetic compounds proper and N+N.GEN combinations (or N+A units).

There exist several institutionalised synthetic compounds which end in the constituent *-dawca* ‘giver’, e.g. *kredyt-o-daw-c-a* ‘lender’, *prac-o-daw-c-a* ‘employer’, *ustaw-o-daw-c-a* ‘lawmaker, legislator’, *spadk-o-daw-c-a* ‘testator’. Jadacka (2001: 96, 99) observes that compounds terminating in *-dawca* represent a fairly numerous group of neologisms in the Polish vocabulary at the end of the twentieth century (i.e. after 1989).<sup>23</sup>

As shown in (21)–(22) below, the existence of synthetic compounds proper terminating in *-dawca*, such as *licencj-o-daw-c-a* ‘licensor’, does not block the formation (and use of) a synonymous N+N.GEN juxtaposition, i.e. *dawc-a licencj-i* ‘licensor (lit. giver of licence)’.

- (21) *licencj-o-daw-c-a*  
 licence+LV+give+SUFF+NOM.SG  
 ‘licensor’
- (22) *daw-c-a*                      *licencj-i*  
 give+SUFF+NOM.SG      licence+GEN.SG  
 ‘licensor’
- (23a) *krwi-o-daw-c-a*  
 blood+LV+give+SUFF+NOM.SG  
 ‘blood donor’
- (23b) *daw-c-a*                      *krw-i*  
 give+SUFF+NOM.SG      blood+GEN.SG  
 ‘blood donor’

<sup>23</sup> Nevertheless, the pattern of synthetic compounds with the constituent *-dawca* ‘giver’ shows many gaps. There are no attestations (in the National Corpus of Polish) of the potentially well-formed compounds *?organodawca* (organ+LV+giver) ‘organ donor’, *?szpikodawca* (marrow+LV+giver) ‘(bone) marrow donor’ or *?sercodawca* (heart+LV+giver) ‘heart donor’. However, the anonymous reviewer points out that Google searches result in 17 hits for *?organodawca* ‘organ donor’ (including some metaphorical uses of the word) and 9 hits for *?szpikodawca* ‘marrow donor’.

The comparison of the occurrence of the (various inflectional forms of the) lexemes in (21)–(23) in the National Corpus of Polish (NKJP) shows that the synthetic compound *licencjodawca* ‘licensor’ is more common in the corpus than the phrasal noun *dawca licencji* (giver.NOM.SG licence.GEN.SG) ‘licensor’: it occurs 167 times, while the equivalent phrasal noun is attested 9 times. In the case of the items in (23), both the synthetic compound *krwiodawca* ‘blood donor’ and the N+N.GEN phrasal noun *dawca krwi* ‘blood donor’ are fairly frequent.<sup>24</sup>

Jadacka (2001: 98) also points out the productivity of the pattern of interfixal-paradigmatic derivation of compounds, represented by such novel compounds as *diet-o-mierz* (diet+LV+measure+ø) ‘dietometer’, where the right-hand constituent is the verb stem *mierz-* (as in *mierzyć* ‘measure.INF’) and the nominalizing morpheme is the paradigmatic formative (i.e. the zero morpheme ø). There exist doublets or even triplets consisting of synonymous compounds terminating in *-mierz* or *-metr* and phrasal nouns consisting of the head *miernik* ‘meter, gauge’ followed by a noun in the genitive.

- (24a) *głośn-ości-o-mierz*  
loud+SUFF+LV+measure+ø  
‘volume unit meter’
- (24b) *audio-metr*  
audio+meter  
‘audiometer’
- (24c) *mier-nik*                      *głośn-ość-i*  
measure+SUFF              loud+SUFF+GEN.SG  
‘volume unit meter, volume indicator’
- (25a) *wilgotn-ości-o-mierz*  
wet+SUFF+LV+measure+ø  
‘moisture meter’
- (25b) *higro-metr*  
hygro+meter  
‘hygrometer’
- (25c) *mier-nik*                      *wilgotn-ość-i*  
measure+SUFF              wet+SUFF+GEN.SG  
‘hygrometer, moisture meter’

<sup>24</sup> There is a difference in the occurrence of the nominative singular forms of both competing lexemes: the compound occurs 345 times and the phrasal noun 57 times, mainly in the expression *honorowy dawca krwi* ‘honorary blood donor’.

The usage of N+N.GEN pattern allows the speaker to reach greater precision in denoting the kind of instrument. The genitive attribute can in turn be modified by another genitive, as is shown in (26)–(27).

- |      |  |   |                                 |
|------|--|---|---------------------------------|
| (26) | <i>mier-nik</i><br>measure+SUFF<br>'air humidity meter'  | <i>wilgotn-ość-i</i><br>wet+SUFF+GEN.SG | <i>powietrz-a</i><br>air+GEN.SG |
| (27) | <i>mier-nik</i><br>measure+SUFF<br>'wood moisture meter' | <i>wilgotn-ość-i</i><br>wet+SUFF+GEN.SG | <i>drewn-a</i><br>wood+GEN.SG   |

The N+N.GEN nouns in (26)–(27) above have no corresponding morphological compounds, since there is no pattern which would allow the name of the object (whose moisture is to be tested) to be included in a compound proper. The hypothetical lexemes *\*powietrz-o-wilgotności-o-mierz* (air+LV+moisture+LV+measure+ø) and *\*drewn-o-wilgotności-o-mierz* (wood+LV+moisture+LV+measure+ø) are ill-formed.

Another area where juxtapositions compete with compounds proper is the formation of coordinate composites. Jadacka (2001: 145) observes that juxtapositions, not morphological compounds proper, constituted previously (until the middle of the twentieth century) the recommended pattern employed in creating names of coordinate entities. On the other hand, coordinate juxtapositions (of the multifunctional type)<sup>25</sup> may evolve into compounds proper. While the N+N phrasal lexemes given in (28a) and (28c) are quoted in the literature (e.g. by Damborský 1966; Kallas 1980; Szymanek 2010), they have few (or no) attestations in the NKJP corpus. They were replaced by the corresponding coordinate compounds proper in (28b) and (28c).

- |       |   |
|-------|---|
| (28a) | <i>chłop-robotnik</i><br>peasant+worker<br>'peasant farmer who works in a factory'      |
| (28b) | <i>chłop-o-robotnik</i><br>peasant+LV+worker<br>'peasant farmer who works in a factory' |

<sup>25</sup> According to Renner/Fernández-Domínguez (2011: 876f.), a multifunctional coordinate compound denotes an entity which belongs to two categories simultaneously and can be paraphrased as 'an X + Y is an X who/which is also a Y'.

- (28c) *klub-kawiarni-a*  
club+café+NOM.SG  
'café that hosts cultural events'
- (28d) *klub-o-kawiarni-a*  
club+LV+café+NOM.SG  
'café that hosts cultural events'

In the case of the pairs of multifunctional coordinate phrasal nouns and compounds proper given in (29), both formations coexist (and compete).

- (29a) *krem-żel*  
cream+gel  
'gel cream'
- (29b) *krem-o-żel*  
cream+LV+gel  
'gel cream'
- (29c) *barman-kelner*  
bartender+waiter  
'waiter-bartender'
- (29d) *barman-o-kelner*  
bartender+LV+waiter  
'waiter-bartender'

Certain types of coordinate composites allow for one pattern only, i.e. either the creation of N+N juxtapositions or compounds proper. Multifunctional coordinate composites representing (among others) the following semantic types<sup>26</sup> cannot be expressed by synthetic compounds:

- (30a) Sex+Profession: *kobieta tłumacz*  
(woman translator) 'female translator',  
not \**kobiet-o-tłumacz*
- (30b) Profession+Characteristic Activity: *tancerka szpieg*  
(dancer spy) 'both female dancer and spy',  
not \**tancerk-o-szpieg*
- (30c) Kinship+Profession: *żona aktorka*  
(wife actress) 'actress wife',  
not \**żon-o-aktorka*

<sup>26</sup> The semantic typology is based on that postulated for English by Olsen (2001).

Attributive juxtapositions, such as *wywiad-rzeka* (interview+river) ‘extended interview’, *kobieta anioł* (woman angel) ‘angel of a woman’, cannot be replaced by morphological compounds (with an interfix), i.e. *\*wywiad-o-rzeka* (interview+LV+river) or *\*kobiet-o-aniół* (woman+LV+angel).

On the other hand, hybrid coordinate compounds proper, which can be paraphrased as ‘X is a blend of X and Y’ (Renner/Fernández-Domínguez 2011), have no corresponding N+N juxtapositions, cf. *las-o-step* (forest+LV+steppe) ‘forest-steppe’, *gad-o-ptak* (reptile+LV+bird) ‘archaeopteryx’ and not *\*las-step* or *\*gad-ptak*.

Thus, juxtapositions not only compete with but also complement compounds proper in Polish.

## 7 The treatment of phrasal nouns in Construction Morphology

As noted by Grzegorzczkova (1982: 59) and Długosz-Kurczabowa/Dubisz (1999) and as mentioned in Section 2, in traditional accounts of Polish word-formation (e.g. Klemensiewicz 1939) phrasal nouns were treated as a subtype of composites (i.e. compounds in the broad sense of the term), namely as juxtapositions. In more rigorous descriptive grammars of Polish (e.g. those written in the structuralist paradigm), juxtapositions are excluded from the domain of morphology. Puzynina (1974) argues that multi-word expressions, such as *maszyna do szycia* (machine for sewing) ‘sewing machine’ and *szkoła podstawowa* (school elementary) ‘primary school’, should fall within the domain of phraseological research, and not morphological enquiry.<sup>27</sup> In their chapter on compound nouns in Polish, Grzegorzczkova/Puzynina (1984: 396) recognise only two types of compounds, i.e. compounds proper and solid compounds. They do not devote any attention to juxtapositions. Kallas (1980) treats coordinate multi-word units, such as *kobieta pilot* ‘woman pilot’ and *lalka-niemowlak* (doll baby) ‘baby doll’, as free syntactic combinations and analyses them in the same way as (regular) noun phrases in apposition, such as *mleko – cenny pokarm* ‘milk – precious food’.

Nagórko (1997), in her brief but insightful account of Polish grammar, postulates a strict division between syntax, phraseology and the lexicon. Consequently,

<sup>27</sup> Grzegorzczkova (1982: 59) mentions the existence of juxtapositions, such as *czarna jagoda* (black berry) ‘bilberry’ and *maszyna do pisania* (machine for typing) ‘typewriter’, yet she notes that they do not constitute the subject matter of word-formation proper.

in her chapter on Polish syntax (Chapter V), she notes the occurrence of conventionalised phraseological units but concludes that from the point of view of syntax such strings of words are indivisible (Nagórko 1997: 189).<sup>28</sup> Her conclusion refers both to idiomatic multi-word units, such as *kocie łby* (cat.RA head.NOM.PL) ‘cobblestones’ or *pies ogrodnika* (dog.NOM.SG gardener.GEN.SG) ‘dog in the manger’, as well as semantically regular juxtapositions, e.g. *kosz na śmieci* (bin for rubbish) ‘rubbish bin’ and *gwiazda polarna* (star polar) ‘pole star, Polaris’. In a modular framework (such as the one assumed by Nagórko 1997) it is difficult to draw a rigid and uncontroversial border between lexical multi-word units and freely composed phrases. While such N+N combinations as *człowiek instytucja* (man institution) ‘one-man-institution’ or *kobieta szef* (woman boss) ‘female boss’ are regarded by Nagórko (1997: 190f.) as syntactic units (consisting of a head noun and a nominal attribute), other N+N juxtapositions, such as *lekarz pediatra* (physician pediatrician) ‘pediatrician’ and *szpital-pomnik* (hospital monument) ‘memorial hospital’, are recognised as lexical units.

Such a strict separation of modules of grammar, i.e. morphology, syntax and the lexicon, is characteristic both of structuralist linguistics and of generative framework.<sup>29</sup> Syntax and morphology do not interact, and the lexicon is treated as a collection of irregularities (Bloomfield 1933; Di Sciullo/Williams 1987), i.e. a list of items which carry unpredictable semantic information and/or exhibit other idiosyncratic properties.

A markedly different view of the lexicon and the architecture of grammar is postulated in Construction Grammar (Goldberg 2006), Parallel Architecture and Construction Morphology (Masini 2009; Booij 2010; Masini/Benigni 2012; Booij/Audring 2015; Booij/Masini 2015). The lexicon, referred to as the constructicon, is viewed as a network of construction schemas of varying degrees of abstractness. Schemas are instantiated by fully specified constructions, which are also stored in the lexicon. Such constructions can take the form of syntactic strings, words or units with an intermediate (i.e. both lexical and syntactic) status.

<sup>28</sup> Phraseological units are treated as indivisible from the point of view of syntax as well as semantics also by Grochowski (1982). Cf., however, Lewicki (1976) and Węgrzynek (1998) for some discussion of the internal syntax of idioms in Polish.

<sup>29</sup> N+A phrasal nouns are recognised as free syntactic combinations by, among others, Rutkowski/Progovac (2005), who are proponents of the Minimalist Program, and by Szymanek (2010), who advocates the lexicalist approach. Willim (2001) regards N+A and N+N multi-word units, such as *ogród zoologiczny* (garden zoological) ‘zoo’ and *kobieta-anioł* (lit. woman angel) ‘angel of a woman’ as syntactic constructs, basing her analysis on the discussion of Greek A+N combinations by Ralli/Stavrou (1998). Syntactic constructs are treated as syntactic compounds (i.e. phrasal lexemes) by Booij (2010).

In their cross-linguistic accounts of phrasal nouns, Booij (2010), Masini/Benigni (2012), Booij/Masini (2015), Booij/Audring (2015) formulate phrasal schemas which act both as redundancy statements, which are able to analyse the internal structure of conventionalised multi-word units, and as templates for forming novel multi-word expressions. Similar schemas, postulated for Polish phrasal nouns below, show that phrasal lexemes have the properties of both lexical and syntactic items. On the one hand, phrasal nouns show a complex internal structure analysable by means of phrasal schemas (which may be also employed in analysing the structure of freely composed syntactic units). On the other hand, they have a naming function, which is signalled by the element NAME in the statement of their meaning.

The phrasal schema in (31) can be employed to form novel N+A phrasal nouns, and analyse the structure of such conventionalised units as *kurier dyplomatyczny* (courier diplomatic) ‘diplomatic courier’ and *telefon komórkowy* (phone cellular) ‘mobile phone’. The symbol “E” in (31) stands for the entity denoted by the nominal base of the relational adjective in a given multi-word unit, e.g. *dyplomata* ‘diplomat’ or *dyplomacja* ‘diplomacy’ (as the base of *dyplomatyczny* ‘diplomatic’), and *komórka* ‘cell’ (as the base of *komórkowy* ‘cellular’).

$$(31) \quad [N^0_i A^0_j]_k \leftrightarrow [\text{NAME for SEM}_i \text{ with some relation R to entity E of SEM}_j]_k$$

Since some N+A strings contain classifying adjectives which are not denominal, e.g. *panda wielka* (panda great) ‘giant panda’, the schema in (32) can account for their structure.

$$(32) \quad [N^0_i A^0_j]_k \leftrightarrow [\text{NAME for SEM}_i \text{ with property SEM}_j]_k$$

A classifying adjective (be it relational or a non-derived one) can stand in the pre-head position in a phrasal noun in Polish. Consequently, two more schemas are necessary, to account for the structure of RA+N phrasal nouns, e.g. *nocny dyżur* ‘night shift’ (where the relational adjective *nocny* is derived from *noc* ‘night’) and A+N units which contain a non-derived or deverbal adjective, e.g. *gluchy telefon* (deaf phone) ‘Chinese whispers’, *odżywczy krem na noc* (nourishing cream for night) ‘nourishing night cream’.

$$(33) \quad [A^0_i N^0_j]_k \leftrightarrow [\text{NAME for SEM}_j \text{ with some relation R to entity E of SEM}_i]_k$$

$$(34) \quad [A^0_i N^0_j]_k \leftrightarrow [\text{NAME for SEM}_j \text{ with property SEM}_i]_k$$

Another phrasal schema, given in (35) below, can be postulated for N+N.GEN phrasal nouns, both transparent semantically and idiomatic ones, e.g. *prawa człowieka* (right.NOM.PL man.GEN.SG) ‘human rights’, and *pies ogrodnika* (dog.NOM.SG gardener.GEN.SG) ‘dog in the manger’.

$$(35) \quad [N_i^0 \text{ N-GEN } j]_k \leftrightarrow [\text{NAME for SEM}_i \text{ with some relation R to SEM}_j]_k$$

The schema for coordinate N+N juxtapositions, such as *kelner-barman* ‘waiter-bartender’, is shown below:

$$(36) \quad [N_i^0 \text{ N}_j^0]_k \leftrightarrow [\text{NAME for an entity which is both SEM}_i \text{ and SEM}_j]_k$$

In the non-modular model of grammar, characteristic of Construction Morphology, the strict lexicon-syntax divide is abandoned. Syntax and morphology closely interact and compete with each other. Consequently, multi-word units which are lexical items “are an expected phenomenon within the constructionist view of the language architecture rather than an exception or a marginal case” (Masini/Benigni 2012: 448).

Another phenomenon which is expected within the model of Construction Morphology is the competition between phrasal patterns, which motivate phrasal lexemes, and morphological schemas, which motivate compounds proper or derivatives. The competition was illustrated above (in Section 6) for coordinate juxtapositions and coordinate compounds proper (with a linking vowel), such as *chłop-robotnik* and *chłoporobotnik*, both paraphrasable as ‘peasant farmer who works in a factory’.

In Polish, as in other Slavonic languages (cf. Masini/Benigni 2012, Ohnheiser 2015 and the chapter on Russian, this volume), phrasal lexemes can undergo morphological condensation (i.e. univerbation) and act as (semantic) bases for suffixal derivatives. The derivative *budowlanka* (which contains the denominal adjective *budowlany* ‘relating to building’ and the nominalizing suffix *-ka*) is (roughly)<sup>30</sup> synonymous to the phrasal noun *szkoła budowlana* (school building. RA) ‘secondary technical school of building’.

Interaction between phrasal lexemes and derivatives (or compounds proper), exemplified by univerbation, can be accounted for in Construction Morphology by means of second order schemas (as in Booij/Masini 2015, see also the chapter

<sup>30</sup> Suffixal derivatives resulting from morphological condensation, such as *budowlanka* ‘secondary technical school of building’, are additionally marked as belonging to colloquial Polish (cf. Ohnheiser 2015).



on Dutch, this volume). Such schemas state paradigmatic relations between word-formation schemas and phrasal schemas.

- (37)  $\langle [N_i^0 A_j^0]_k \leftrightarrow [\text{NAME for SEM}_i \text{ with some relation R to entity E of SEM}_j]_k \rangle$   
 $\approx \langle [A -ka]_{Nz} \leftrightarrow [\text{SEM}_k [+familiar]]_z \rangle$

The second order schema given above states that deadjectival nouns terminating in the suffix *-ka* can be motivated by (i.e. semantically related to) phrasal N+RA lexemes.

## 8 Conclusion

This chapter offered a brief overview of multi-word expressions in Polish, focusing on phrasal nouns (which are often referred to as “juxtapositions”) and their interaction with compound nouns. The following subtypes of juxtapositions were discussed at greater length: N+N.GEN, N+A, A+N, and coordinate N+N phrasal lexemes. Juxtapositions do not meet the majority of the criteria for morphological compounds (as stated by Lieber/Štekauer 2009). A morphological compound in Polish, i. e. a compound proper, is written as one orthographic word and inflected like one morphological word (with the inflectional endings attached to the right-hand constituent). It carries one primary lexical stress (typically on the penultimate syllable). A juxtaposition, in contrast, consists of two or more orthographic words, each of which is inflected. Constituents of a juxtaposition can carry independent lexical stresses, e.g. *mąż stanu* (man.NOM state.GEN) ‘statesman’. On the other hand, juxtapositions act as naming units, therefore they can be regarded as multi-word lexical items. It is important to emphasise here that phrasal nouns in Polish are far from being exclusively idiomatic and unanalysable multi-word expressions. While selected multi-word units are semantically non-compositional (and can be treated as figurative idioms), e.g. *biały kruk* (white raven) ‘rare specimen’, the majority of phrasal nouns in Polish show varying degrees of semantic transparency. They are also analysable syntactically, which results in some degree of their syntactic mobility, as is shown above for coordinate N+N juxtapositions and for phrasal nouns consisting of a head noun and a relational adjective. The syntactic analysability of phrasal nouns also tallies with the fact that their constituents are inflected as independent morphological words.

The approach of Construction Morphology allows the researcher to provide a proper account of the above-mentioned properties of phrasal nouns in Polish. Multi-word units inherit their syntactic structure from construction schemas. In

other words, phrasal construction schemas can be employed to analyse the internal structure of existing phrasal nouns. The construction schemas state that phrasal nouns are generally interpreted as “names of kinds” (i.e. as subtypes of entities), e.g. *droga dojazdowa* (road access.RA) ‘access road’, *miernik promieniowania* (meter.NOM radiation.GEN) ‘radiation meter’, *kierowca-dostawca* (driver.NOM supplier.NOM) ‘delivery driver’. Phrasal schemas can be used not only as redundancy statements (to license conventionalised phrasal nouns), but also as patterns for creating novel multi-word units. The latter function of schemas is particularly important in Polish since the patterns for phrasal nouns discussed above are very productive. Novel phrasal lexemes abound in Polish, e.g. in the vocabulary associated with the Internet technology, as is illustrated by such multi-word units as *dostawca usług internetowych* (provider.NOM.SG service.GEN.PL Internet.RA.GEN.PL) ‘Internet service provider’, *pióro świetlne* (pen light.RA) ‘light pen’, *ekran dotykowy* (screen touch.RA) ‘touch screen’, *telefon z klapką* (phone with flip) ‘clamshell phone’. Schemas for multi-word units in Polish both compete with and complement patterns of compounding. As was shown in Section 6, fairly numerous examples can be found of co-existence of synonymous compound nouns and phrasal nouns in Polish, such *licencjodawca* (licence+LV+giver) and *dawca licencji* (giver.NOM licence.GEN) ‘licensor’. However, the formation of synthetic compounds appears to be more restricted than the coinage of N+N.GEN or N+A multi-word units. Moreover, some types of naming units can be formed only by using phrasal schemas, e.g. attributive N+N compounds, such as *człowiek-zagadka* (man mystery) ‘mystery man’, and coordinate phrasal nouns consisting of units denoting Kinship+Profession, e.g. *mąż prawnik* (husband lawyer) ‘lawyer husband’. Finally, it was shown that multi-word units need to be accessible to affixation and compounding processes (i.e. to morphological construction schemas), as they undergo morphological condensation. Such evidence indicates that the study of both morphologically complex words (such as compounds proper) and multi-word units should be of interest to morphologists. Researchers should pay greater attention to the interaction between phrasal lexemes and morphologically complex words in Polish, which is the kind of phenomenon that can find an appropriate account within the framework of Construction Morphology.

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